

Remarks

In the present response, one claim (12) is amended. Claims 1-19, 27-29, and 31-32 are presented for examination.

Claim 12 is amended to correct a typographical error and provide antecedent basis for the term “the electronic device” appearing in line 5 of the claim.

I. Drawing Objections: 37 CFR § 1.83(a)

The drawings are objected to under 37 CFR 1.83(a) as not showing every element in the claims. Applicants respectfully traverse.

First, the Office Action argues that the “electromagnetic shield disclosed around the antenna” in claims 1, 12, and 27 is not disclosed. By way of example, FIGS. 2-4 of the original drawings show a housing 32 that provides electromagnetic shielding for an antenna 30. As stated in the specification in paragraph [0021]: “In the illustrated embodiment, the antenna housing 32 extends outward from the printed circuit board 28 around the perimeter of antenna 30.” Further, paragraph [0020] states that the antenna is electromagnetically shielded.

Second, the Office Action argues that the “conducting coating” in claim 10 is not disclosed. By way of example, FIGS. 2-4 of the original drawings show a housing 32 that provides electromagnetic shielding for an antenna 30. As stated in the specification in paragraph [0020]: “In this embodiment, the antenna housing 32 is fabricated of a conductively-coated plastic foam.” Further, claim 10 is an original claim filed in the specification. Original claims submitted in an application form part of the specification.

Third, the Office Action argues that the “plastic foam” in claim 31 is not disclosed. By way of example, FIGS. 2-4 of the original drawings show a housing 32 that provides electromagnetic shielding for an antenna 30. As stated in the specification in paragraph [0020]: “In this embodiment, the antenna housing 32 is fabricated of a conductively-coated plastic foam.”

Fourth, the Office Action argues that reference characters 48, 54, and 64 have all been used to designate the “metal plate” in figures 5 and 8. Figure 5 shows reference number 48, not numbers 54 or 64. As described in the original specification, reference number 48 in figure 5 is a protective cover (see paragraph [0023]). By contrast, figure 8

shows another embodiment, different than figure 5. In figure 8, reference number 54 is a flange and reference number 64 is a metal plate (see paragraphs [0025 – 0027]).

II. Claim Rejections: 35 USC § 112

Claim 27 is rejected under 35 USC § 112, first paragraph, as failing to comply with the enablement requirement. The Office Action argues it is not clear how function of the following claim element (“tuning an antenna to produce a maximum output at a defined load”) works with the specification. Applicants respectfully traverse.

First, the rejected claim element (“tuning an antenna to produce a maximum output at a defined load”) appears in the originally filed claim 27. Original claims submitted in an application form part of the specification.

Second, the original specification discusses tuning antennas at numerous locations (example, see paragraphs [0004, 0016, 0028]).

The purpose of the written description requirement of 35 U.S.C. § 112, first paragraph, is to ensure that the inventor had *possession*, as of the filing date of application relied upon, of the specific subject matter later claimed by him (see, *Application of Wertheim*, 541 F.2d 257, 262, 191 USPQ 90, 96 (CCPA 1976)). As has been repeatedly stated by both the Court of Customs and Patent Appeals and the Federal Circuit:

[A]ll that is required is that it [the applicant] *reasonably conveyed* to persons skilled in the art that, as of the filing date thereof, the inventor had *possession* of the subject matter later claimed by him. (See *Eiselstein*, 52 F.3d at 1039, 34 USPQ2d 1467, 1470 (emphasis added). See also, *Tronzo v. Biomet, Inc.*, 156 F.3d 1154, 1158, 47 USPQ2d 1829, 1832 (Fed. Cir. 1998)).

Clearly, Applicants had possession of the claim element (“tuning an antenna to produce a maximum output at a defined load”) since this element appears in the originally filed claim 27 and specification.

III. Claim Rejections: 35 USC § 102(e)

Claims 1-19, 27-29, and 31-32 are rejected under 35 USC § 102(e) as being anticipated by USPN 6,531,985 (Jones). Applicants respectfully traverse this rejection.

A proper rejection of a claim under 35 U.S.C. §102 requires that a single prior art reference disclose each element of the claim. See MPEP § 2131, also, *W.L. Gore & Assoc., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 U.S.P.Q. 303, 313 (Fed. Cir. 1983). Since Jones neither teaches nor suggests each element in the claims, these claims are allowable over Jones.

Claim 1

Independent claim 1 recites numerous recitations that are not taught or suggested in Jones. As one example, claim 1 recites a radio module having three elements: a radio transceiver, an antenna, and an electromagnetic shield. The Office Action does not identify “a radio module” in Jones. Which element in Jones corresponds to the claimed radio module? For discussion purposes, Applicants assume that Office Action intends to argue that the laptop computer 10 in FIG. 1 of Jones corresponds to the claimed radio module.

The laptop computer in Jones is not a radio module for an electrical device as recited in claim 1.

In order for a prior art reference to be anticipatory under 35 U.S.C. § 102 with respect to a claim, “[t]he elements must be arranged as required by the claim,” see M.P.E.P. § 2131, citing *In re Bond*, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990). For at least these reasons, independent claim 1 and its dependent claims are allowable over Jones.

As another example, claim 1 recites an electromagnetic shield disposed around the antenna. The Office Action cites Fig. 3 of Jones and reference number 13 for allegedly teaching this recitation. Applicants respectfully disagree.

Reference number 13 in Jones is a housing of a laptop computer. Nowhere does Jones state that the housing is “an electromagnetic shield.”

There can be no difference between the claimed invention and the cited reference, as viewed by a person of ordinary skill in the art (see *Scripps Clinic & Research*

Foundation v. Genentech Inc., 927 F.2d 1565, 1576 (Fed. Cir. 1991)). For at least these reasons, independent claim 1 and its dependent claims are allowable over Jones.

As another example, claim 1 recites an electromagnetic shield disposed around the antenna “to isolate the antenna from loading effects of components of the electrical device that are external to the radio module.” Jones does not disclose a shield around the antenna to isolate the antenna from loading effects of components external to the radio module. Instead, Jones states the following: “Antennas 20 can be located at various points around the base of the laptop or on the lid so that they would be shielded from each other by the housing of the laptop” (see col. 7, lines 65-67).

Jones expressly teaches separating two antennas so they are shielded from each other, not shielded from electrical devices external to the radio module. Jones does not even discuss shielded the antennas from external electromagnetic radiation.

For a prior art reference to be anticipatory under 35 U.S.C. § 102 with respect to a claim, “[t]he elements must be arranged as required by the claim” (see M.P.E.P. § 2131, citing *In re Bond*, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990)). For at least these reasons, independent claim 1 and its dependent claims are allowable over Jones.

Claim 12

Independent claim 12 recites numerous recitations that are not taught or suggested in Jones. As one example, claim 12 recites a radio module having three elements: a printed circuit board, an antenna, and an electromagnetic shield. The Office Action does not identify “a radio module” in Jones. Which element in Jones corresponds to the claimed radio module? For discussion purposes, Applicants assume that Office Action intends to argue that the laptop computer 10 in FIG. 1 of Jones corresponds to the claimed radio module.

The laptop computer in Jones is not a “radio module in an electrical device” as recited in claim 12.

In order for a prior art reference to be anticipatory under 35 U.S.C. § 102 with respect to a claim, “[t]he elements must be arranged as required by the claim,” (see M.P.E.P. § 2131, citing *In re Bond*, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990)). For at least these reasons, independent claim 12 and its dependent claims are allowable over Jones.

As another example, claim 12 recites an electromagnetic shield extending around the antenna. The Office Action cites Fig. 3 of Jones and reference number 13 for allegedly teaching this recitation. Applicants respectfully disagree.

Reference number 13 in Jones is a housing of a laptop computer. Nowhere does Jones state that the housing is "an electromagnetic shield."

There can be no difference between the claimed invention and the cited reference, as viewed by a person of ordinary skill in the art (see *Scripps Clinic & Research Foundation v. Genentech Inc.*, 927 F.2d 1565, 1576 (Fed. Cir. 1991)). For at least these reasons, independent claim 12 and its dependent claims are allowable over Jones.

As another example, claim 12 recites an electromagnetic shield extending around the antenna "to isolate the antenna from loading effects of components of the electrical device that are external to the radio module." Jones does not disclose a shield around the antenna to isolate the antenna from loading effects of components external to the radio module. Instead, Jones states the following: "Antennas 20 can be located at various points around the base of the laptop or on the lid so that they would be shielded from each other by the housing of the laptop" (see col. 7, lines 65-67).

Jones expressly teaches separating two antennas so they are shielded from each other, not shielded from electrical devices external to the radio module. Jones does not even discuss shielded the antennas from external electromagnetic radiation.

For a prior art reference to be anticipatory under 35 U.S.C. § 102 with respect to a claim, "[t]he elements must be arranged as required by the claim" (see M.P.E.P. § 2131, citing *In re Bond*, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990)). For at least these reasons, independent claim 12 and its dependent claims are allowable over Jones.

Claim 27

Independent claim 27 recites numerous recitations that are not taught or suggested in Jones. As one example, claim 27 is a method that recites disposing a shield around the antenna to establish the defined load on the antenna. The Office Action cites FIGS. 1 and 2 of Jones for allegedly teaching this recitation. Applicants respectfully disagree.

FIGS. 1 and 2 of Jones show two antennas 20a and 20b located at opposite sides of a laptop computer. A housing 13 of the laptop covers the antennas. Nowhere does

Jones disclose that the housing 13 is disposed around the antennas “to establish a defined load on the antenna.”

In order for a prior art reference to be anticipatory under 35 U.S.C. § 102 with respect to a claim, “[t]he elements must be arranged as required by the claim,” see M.P.E.P. § 2131, citing *In re Bond*, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990). For at least these reasons, independent claim 27 and its dependent claims are allowable over Jones.

As another example, claim 27 recites disposing the shield around the antenna “to isolate the antenna from electrical noise generated by electrical components within the electrical device but external to the radio module.” Jones does not disclose a shield around the antenna to isolate the antenna from electrical noise. Instead, Jones states the following: “Antennas 20 can be located at various points around the base of the laptop or on the lid so that they would be shielded from each other by the housing of the laptop” (see col. 7, lines 65-67).

Jones expressly teaches separating two antennas so they are shielded from each other, not shielded from electrical devices external to the radio module. Jones does not even discuss shielded the antennas from external electromagnetic radiation.

There can be no difference between the claimed invention and the cited reference, as viewed by a person of ordinary skill in the art (see *Scripps Clinic & Research Foundation v. Genentech Inc.*, 927 F.2d 1565, 1576 (Fed. Cir. 1991)). For at least these reasons, independent claim 27 and its dependent claims are allowable over Jones.

IV. Claim Rejections: 35 USC § 103(a)

Claims 4, 18-19, and 29 are rejected under 35 USC § 103(a) as being unpatentable over Jones. This rejection is traversed.

Dependent claim 4 depends from independent claim 1; dependent claims 18-19 dependent from independent claim 12; and dependent claim 29 depends from independent claim 27. As discussed in section III, Jones does not teach or even suggest all the elements of independent claims 1, 12, and 27. For at least the reasons given above in section III with respect to the respective independent claims, dependent claims 4, 18-19, and 29 are allowable over Jones.

CONCLUSION

In view of the above, Applicants believe that all pending claims are in condition for allowance. Allowance of these claims is respectfully requested.

Any inquiry regarding this Amendment and Response should be directed to Philip S. Lyren at Telephone No. 832-236-5529. In addition, all correspondence should continue to be directed to the following address:

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Respectfully submitted,

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